

IN THE CLAIMS:

Please CANCEL claims 17, 18, 22, and 23 without prejudice to or disclaimer of their subject matter. Please AMEND claims 15, 16, and 19-21 as follows.

1. (Original) An image forming apparatus for executing various jobs transmitted from an information processing apparatus, the image forming apparatus comprising:
 - process analysis means for analyzing a process transmitted from said information processing apparatus;
 - job generation means for generating a job according to the analysis of process by said process analysis means;
 - job process means including job management means for managing information constituting a job, binder management means for managing information constituting a binder and document management means for managing information constituting a document, and adapted to process the job generated by said job generation means;
 - document generation means for dividing the job generated by said job generation means into a smaller document unit thereby generating a document;
 - document process means for processing a document generated by said document generation means;
 - page generation means for dividing the document generated by said document generation means into a smaller page unit thereby generating a page;
 - page process means for processing a page generated by said page generation means;

band generation means for dividing the page generated by said page generation means into a smaller band unit thereby generating a band;

band process means for processing a band generated by said band generation means; and

device use request arbitration means for arbitrating the requests for using a device from said document generation means, said document process means, said page process means and said band process means;

wherein at least one of said document process means, said page process means and said band process means executes the process according to the formats of input data and output data in said document process means, said page process means and said band process means.

2. (Original) An apparatus according to claim 1, wherein said job management means processes a job constituted by at least a binder.

3. (Original) An apparatus according to claim 2, wherein said binder management means processes a binder constituted by at least a document.

4. (Original) An apparatus according to claim 3, wherein said document management means processes a document constituted by at least a page.

5. (Original) An apparatus according to claim 1, wherein said job management means executes process in a book binding mode in case of detecting the book binding mode.

6. (Original) An apparatus according to claim 1, wherein said job management means processes the number of output copies and the order of output (collation).

7. (Original) An apparatus according to claim 1, wherein said binder management means processes the number of output copies and the order of output (collation).

8. (Original) An apparatus according to claim 1, wherein said document management means processes the number of output copies and the order of output (collation).

9. (Original) An apparatus according to claim 1, wherein said job management means processes a finishing operation including at least one of stapled sorting, shift sorting and rotated sorting.

10. (Original) An apparatus according to claim 1, wherein said binder management means processes a finishing operation including at least one of stapled sorting, shift sorting and rotated sorting.

11. (Original) An apparatus according to claim 1, wherein said document management means processes a finishing operation including at least one of stapled sorting, shift sorting and rotated sorting.

12. (Original) An apparatus according to claim 1, wherein each of said job management means, said binder management means and said document management means is capable of processing a finishing operation including at least one of stapled sorting, shift sorting and rotated sorting, and management means designated for finishing among said job management means, said binder management means and said document management means generates an output document constituting the output address for said document process means, said page process means or said band process means.

13. (Original) An apparatus according to claim 12, wherein, plural management means are designated for finishing, such designation is analyzed in the order of said job management means, said binder management means and said document management means and the designation of finishing is rendered effective only in the management means of the highest rank among the management means designated for finishing, whereby said management means of the highest rank generates said output document while the designation of finishing is rendered ineffective for the management means positioned in the lower ranks than said management means of the highest rank.

14. (Original) A control method for an image forming apparatus for executing various jobs transmitted from an information processing apparatus, the method comprising:

a process analysis step of analyzing a process transmitted from said information processing apparatus;

a job generation step of generating a job according to the analysis of process by said process analysis step;

a job process means including a job management step of managing information constituting a job, a binder management step of managing information constituting a binder and a document management step of managing information constituting a document, and adapted to process the job generated by said job generation step;

a document generation step of dividing the job generated by said job generation step into a smaller document unit thereby generating a document;

a document process step of processing a document generated by said document generation step into a smaller page unit thereby generating a page;

a page process step of processing a page generated by said page generation step;

a band generation step of dividing the page generated by said page generation step into a smaller band unit thereby generating a band;

a band process step of processing a band generated by said band generation step; and

a device use request arbitration step of arbitrating the requests for using a device from said document generation step, said document process step, said page process step and said band process step;

wherein at least one of said document process step, said page process step and said band process step executes the process according to the formats of input data and output data in said document process step, said page process step and said band process step.

15. (Currently Amended) A computer program to be executed by a computer of an image forming apparatus for executing various jobs transmitted from an information processing apparatus, the computer program being embodied in a computer readable medium for performing steps comprising:

~~a code~~ of a process analysis step of analyzing a process transmitted from said information processing apparatus;

~~a code~~ of a job generation step of generating a job according to the analysis of process by said process analysis step;

~~a code~~ of a process means including a job management step of managing information constituting a job, a binder management step of managing information constituting a binder and a document management step of managing information constituting a document, and adapted to process the job generation step;

~~a code~~ of a document generation step of dividing the job generated by said job generation step into a smaller document unit thereby generating a document;

a code of a document process step of processing a document generated by said document generation step;

a code of a page generation step of dividing the document generated by said document generation step into a smaller page unit thereby generating a page;

a code of a page process step of processing a page generated by said page generation step;

a code of a band generation step of dividing the page generated by said page generation step into a smaller band unit thereby generating a band;

a code of a band process step of processing a band generated by said band generation step; and

a code of a device use request arbitration step of arbitrating the requests for using a device from said document generation step, said document process step, said page process step and said band process step;

wherein at least one of the code of said document process step, the code of said page process step and the code of said band process step executes the process according to the formats of input data and output data in the code of said document process step, the code of said page process step and the code of said band process step.

16. (Currently Amended) An image forming apparatus capable of communicating with an information processing apparatus, comprising:

reception means for receiving process information from said information processing apparatus;

job generation means for generating a job based on the process information received by said reception means;

binder generation means for generating plural binders based the job generated by said job generation means;

document generation means for generating plural documents based on the binder generated by said binder generation means;

determination means for determining a device to be used, among plural ~~device~~ devices provided in said image forming apparatus, based on the process information received by said reception means; and

assignment means for assigning the document generated by said document generation means to the device determined by said determination means;

page generation means for generating plural pages based on the document generated by said document generation means; and

band generation means for generating plural bands based on the page generated by said page generation means;

wherein said assignment means assigns the page generated by said page generation means and the band generated by said band generation means to the device determined by said determination means.

17-18. (Cancelled)

19. (Currently Amended) A control method for an image forming apparatus capable of communicating with an information processing apparatus, the method comprising:

a reception step of receiving process information from said information processing apparatus;

a job generation step of generating a job based on the process information received by said reception step;

a binder generation step of generating plural binders based the job generated by said job generation step;

a document generation step of generating plural documents based on the binder generated by said binder generation step;

a determination step of determining a device to be used, among plural device provided in said image forming apparatus, based on the process information received by said reception step; and

an assignment step of assigning the document generated by said document generation step to the device determined by said determination step;

a page generation step of generating plural pages based on the document generated in said document generation step; and

a band generation step of generating plural bands based on the page generated in said page generating step.

wherein the page generated in said page generation step and the band generated in said band generation step are assigned in said assignment step to the device determined in said determining step.

20. (Currently Amended) A computer program to be executed by a computer of an image forming apparatus capable of communicating with an information processing apparatus, the computer program being embodied in a computer readable medium for performing steps comprising:

a reception step of receiving process information from said information processing apparatus;

a job generation step of generating a job based on the process information received by said reception step;

a binder generation step of generating plural binders based the job generated by said job generation step;

a document generation step of generating plural documents based on the binder generated by said binder generation step;

a determination step of determining a device to be used, among plural device provided in said image forming apparatus, based on the process information received by said reception step; and

an assignment step of assigning the document generated by said document generation step to the device determined by said determination step;

a page generating step of generating plural pages based on the document generated in said document generation step; and
a band generation step of generating plural bands based on the page generated in said page generation step,
wherein the page generated in said page generation step and the band generated in said band generation step are assigned in said assignment step to the device determined in said determining step.

21. (Currently Amended) A computer readable memory medium storing the a computer program for performing steps comprising: according to claim 20:

a reception step of receiving process information from said information processing apparatus;
a job generation step of generating a job based on the process information received by said reception step;
a binder generation step of generating plural binders based the job generated by said job generation step;
a document generation step of generating plural documents based on the binder generated by said binder generation step;
a determination step of determining a device to be used, among plural device provided in said image forming apparatus, based on the process information received by said reception step;

an assignment step of assigning the document generated by said document generation step to the device determined by said determination step;

a page generating of generating plural pages based on the document generated based on the document generated in said document generation step; and

a band generation step of generating plural bands based on the page generated in said page generation step,

wherein the page generated in said page generation step and the band generated in said band generation step are assigned in said assignment step to the device determined in said determining step.

22-23. (Cancelled)